# 374MHz SAW Filter for WLAN

**Model:** TB374GD  
**Part No:** MA04268  
**REV NO.:** 7

## A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. Operating Temperature: -10 °C to 85 °C
3. Storage Temperature: -40 °C to 85 °C

## B. ELECTRICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Type.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency, $F_c$</td>
<td>MHz</td>
<td>-</td>
<td>374</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Insertion Loss, $IL$</td>
<td>dB</td>
<td>-</td>
<td>8.5</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Passband width, $BW_3$</td>
<td>MHz</td>
<td>17</td>
<td>24</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Amplitude Ripple in $F_c$ +/- 7MHz</td>
<td>dB</td>
<td>-</td>
<td>0.6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Group delay ripple in $F_c$ +/- 7MHz</td>
<td>nS</td>
<td>-</td>
<td>40</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Triple transit suppression</td>
<td>dB</td>
<td>30</td>
<td>37</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Attenuation:(Reference level from Min IL)

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Type.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>$F_c$ -100 to -33MHz</td>
<td>dB</td>
<td>45</td>
<td>52</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>$F_c$ -33 to -22MHz</td>
<td>dB</td>
<td>40</td>
<td>51</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>$F_c$ -22 to -16.5MHz</td>
<td>dB</td>
<td>30</td>
<td>42</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>$F_c$ +16.5 to +22MHz</td>
<td>dB</td>
<td>30</td>
<td>41</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>$F_c$ +22 to +43 MHz</td>
<td>dB</td>
<td>35</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$F_c$ +43 to +100 MHz</td>
<td>dB</td>
<td>40</td>
<td>47</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

(1) Wide band Response:

![Wide band Response Graph]

(2) Passband Response:

![Passband Response Graph]
D. MEASUREMENT CIRCUIT:

(1) 50Ω unbalanced:

\[ L_2 = 27 \text{ nH} \]
\[ L_1 = 22 \text{ nH} \]
\[ C_1 = 7 \text{ PF} \]

(2) 200Ω balanced:

\[ C_1 = C_2 = 27 \text{ PF} \]
\[ C_3 = C_4 = 15 \text{ PF} \]
\[ L_1 = 27 \text{ nH} \]
\[ L_2 = 27 \text{ nH} \]

(3) 250Ω balanced:

\[ C_1 = C_2 = 25 \text{ PF} \]
\[ C_3 = C_4 = 9 \text{ PF} \]
\[ L_1 = 29 \text{ nH} \]
\[ L_2 = 41 \text{ nH} \]

E. OUTLINE DRAWING:
374MHz SAW Filter for WLAN
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Revision: 7

Dimensions:
- Length: 5.0 ± 0.2 mm
- Width: 5.0 ± 0.2 mm
- Height: 1.7 ± 0.2 mm

Pin Configuration:
1. Input
2. Input Ground or bad
3. Output
4. Output Ground or bad
5. Ground

Unit: mm

FIGURE 1: TB374GD SAW Filter Layout
F. PACKING:

1. REEL DIMENSION

2. TAPE DIMENSION